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EXAMINER

CHOU, ALBERT T

ART UNIT

PAPER NUMBER

2416

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11/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/760,057	<b>Applicant(s)</b> KUBLER ET AL.	
	<b>Examiner</b> ALBERT T. CHOU	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/08/2008 &amp; 10/20/2008</u> .                             | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on October 8, 2008 has been entered. Claims 22, 31, 40, 49, 52, 59, 68, 76, 79, 81, and 83 have been amended. No claims have been canceled. No claims have been added. Claims 22-93 are pending in this application, with claims 22, 40, 52, 68 and 79 being independent.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 22-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 22 recites the amended limitation "*the processor stops the processing of queued digital voice data for a predetermined amount of time upon detecting that the group identifier associated with the queued digital voice data is different than the group identifier associated with the last digital voice data processed*".

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The above mentioned limitation is not supported by the specification as originally filed, even though Applicants state in REMARKS that the support for this amendment may be found at pages 280-282 of the Application.

There is no support found relating to “the group identifier associated with the last digital voice data processed”, or “detecting that the group identifier ...is different than the group identifier associated with the last digital voice data processed” as claimed.

The only statement, which is related to the amendment, can be found at pages 280-282 is “Thus, for each group of data (each group of voice data extracted from voice packets having a common group identifier), the control processing circuit 5609 begins to wait the predetermined queuing time before beginning conversion. Thereafter, no queuing time is required until the next group of voice packets begin.” (See page 281, first paragraph), which apparently addresses different scope or limitation as amended in claim 22.

Claims 23-39 depend from claim 22 and thus are rejected on the same basis of rejection as to claim 22.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 40-51 and 68-93 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 40, 68 and 79 recites the limitation “*a processor for processing (or monitoring) digital voice data to detect a lack of voice activity (or speech) for at least a predefined period of time*”. According to page 280 of the Specification, the conversion circuitry monitors incoming voice streams for gaps in voice input. The incoming voice streams appear to be analog voice signals, not digital voice data. Thus, the voice activity and speech are pertinent to analog voice signals, not digital voice data.

Claims 40, 68 and 79 further recites the limitation “*the processor leaving the group identifier unchanged, otherwise*”, “*refraining from assigning a different group identifier to the digital voice data, otherwise*” and “*refraining from changing the processing of digital voice data and the identifier, otherwise*”, respectively.

There is no clear explanation in the Specification when or how these conditions will be met.

Claims 41-51, 69-78 and 80-93 depend from independent claims 40, 68 and 79, respectively, and thus are rejected on the same basis of rejection as to claims 40, 68 and 79, respectively.

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Claim 67 recites the limitation “*wherein the voice stream comprises a digital representation of voice information*”. There is insufficient antecedent basis for this limitation in the claim. Claim 69 depends from claim 67 (appears to be a typographical error) and thus is rejected based on the same basis of rejection as to claim 67.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 22-24, 29-42, 47-52, 57-69, 74-82 and 87-93 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,157,653 to Kline et al. (hereinafter “Kline”).

Regarding claim 22, Kline teaches a packet voice processing circuit [**Figs. 1-6**] comprising:

an interface for receiving voice data packets via a packet network [**Fig. 2; Access Interface 214 or Packet Switch 204**], each of the voice data packets comprising digital voice data [**Figs. 2-3; Voice Packet Processor 212 converts the**

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**received voice to packets or receives the voice packet; col. 4, lines 28-44]** and an associated group identifier **[Figs. 2-3; Voice Packet Processor 212 assigns a sequence number for a voice packet; col. 4, lines 57-60];**

a queue for storing the digital voice data **[Fig. 4; Smoothing Buffer 402];**

a processor for detecting a change in the group identifier **[Fig. 5, step 505; the changing of sequence number of each voice packet is checked (a different sequence number is assigned to each voice packet); col. 6, lines 23-39];** and wherein

the processor stops the processing of queued digital voice data for a predetermined amount of time upon detecting that the group identifier associated with the queued digital voice data **[Figs. 2-5; placing the packet in voice packet buffer (smoothing buffer) for a predetermined amount of time before being dequeued and playout; col. 2, lines 17-28, col. 6, lines 3-10, line 58- col. 7, line 2];** and

the processor continuing processing of queued digital voice data, otherwise **[col. 2, line 17-28].**

Regarding claims 23, 24, 41, 42, 87 and 88, Kline teaches the packet-network is a wired network **[Fig. 1]** and the wired network comprises an Ethernet compatible network **[Fig. 1; LAN devices; col. 4, lines 41-42].**

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Regarding claims 29, 30, 47, 48, 57, 58, 74, 75, 89 and 90, Examiner takes Office Notice of fact without documentary evidence that the packet network uses a transmission control protocol (TCP)/Internet protocol (IP).

Regarding claims 31 and 59, Kline teaches changing the processing of digital voice data comprises delaying the conversion of queued digital voice data by an adjustable queuing time **[Figs. 2-6; Fig. 5, steps 515-555, Adjusting queuing/smoothing time using Smoothing Buffer 402, computing Waiting Time and comparing Longest Smoothed Waiting time; col. 5, line 59 – col. 6, line 22, col. 6, line 63 – col. 6, line 64]**.

Regarding claims 32-37 and 60-65, Kline teaches the adjustable queuing time is a function of a propagation delay of the packet network **[Fig. 5, step 545-555; col. 7, lines 9-64]**, the adjustable queuing time is initialized to a predefined value **[Fig. 5; a predetermined time, typically in minutes; col. 7, lines 9-64]**, the predefined value is approximately 200 milliseconds **[Fig. 5; typically in minutes; col. 7, lines 9-64]**, the adjustable queuing time is determined using a test packet sent over the packet network **[Figs. 1-6; queuing time can be determined either a known network wide parameter or it can be calculated by specific path, a test path, chosen by the routing entity; col. 7, lines 9-64]**, the test packet is sent prior to establishment of voice communication and the test packet is interspersed with digital voice data packets **[Figs.**



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**1-6; since it can be determined by a known network wide parameter, it is tested prior to the establishment of voice communication; col. 7, lines 9-64].**

Regarding claims 38, 39, 50, 51, 66, 69, 77, 78, 82, 91 and 92, Kline teaches the group identifier is a pseudo random number **[Fig. 3; sequence number 306]** and the circuit further comprising a converter for converting digital voice data to an analog voice stream **[Fig. 1 & 4, step 408; convert digital voice data to analog voice; col. 5, lines 59-67]** or converting an analog voice stream to digital voice data **[Fig. 2; Packet Voice Processor 212 converts analog voice stream to digital voice data]**.

Regarding claim 40, Kline teaches a packet voice processing circuit **[Figs. 1-6]** comprising:

a processor for processing incoming voice streams to detect a lack of voice activity for at least a predefined period of time **[Figs. 2-4; It is inherent in Kline that Voice Packet Processor determines a talkspurt based on a predefined period of time in order to send packets uniformly space by del\_T units of time during a talkspurt; col. 5, lines 17-23];**

an interface **[Fig. 2; Access Interface 214]** for transmitting voice data packets via a packet network **[Fig. 1; A packet network]**, each of the voice data packets comprising digital voice data **[Figs. 2-3; Voice Packet Processor 212 converts the received voice to packets or receives the voice packet; col. 4, lines 28-44]** and an

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associated group identifier **[Figs. 2-3; Voice Packet Processor 212 assigns a sequence number for a voice packet; col. 4, lines 57-60];**

the processor changing the group identifier if a lack of voice activity for at least a predetermined period of time is detected **[Figs. 2-4; When next talkspurt occurs, the transmitted packets will contain the new assigned sequence numbers; col. 5, lines 17-33]** and

the processor leaving the group identifier unchanged, otherwise **[i.e. continuing to receive incoming voice streams without silence, no sequence number is assigned until a sufficient number of sample have been accumulate; col. 4, lines 61-67].**

Regarding claims 49, 76, 80 and 81, Kline teaches identifying at least one difference between speech and background noise and the minimum period of time of a lack of voice activity is approximately one second **[Fig. 5; Identifying a silence gap in the speech or if a predetermined time, typically in minutes, has elapsed; col. 7, lines 9-64].**

Regarding claim 52, Kline teaches a method of processing voice packets received over a packet network **[Figs. 1-6]** comprising:

receiving digital voice data packets via the packet network **[Fig. 2; Access Interface 214 or Packet Switch 204]**, each of the digital voice data packets comprising digital voice data **[Figs. 2-3; Voice Packet Processor 212 converts the received**

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**voice to packets or receives the voice packet; col. 4, lines 28-44]** and an associated group identifier **[Figs. 2-3; Voice Packet Processor 212 assigns a sequence number for a voice packet; col. 4, lines 57-60];**

queuing the digital voice data from the received digital voice data packets **[Fig. 2 or 4; store the packet in Local Buffer 208 or Smoothing Buffer 402; col. 4, lines 4-27];**

monitoring the group identifier associated with the queued digital voice data to detect a change in group identifier **[Fig. 5, step 505; the changing of sequence number of each voice packet is checked (a different sequence number is assigned to each voice packet); col. 6, lines 23-39];**

stopping the processing of queued digital voice data for a predetermined amount of time when a change in group identifier is detected **[Figs. 2-5; placing the packet in voice packet buffer (smoothing buffer) for a predetermined amount of time before being dequeued and playout; col. 2, lines 17-28, col. 6, lines 3-10, line 58- col. 7, line 2];** and

continuing processing of queued digital voice data, otherwise **[col. 2, line 17-28].**

Regarding claim 68, Kline teaches a method of processing voice for communication over a packet network **[Figs. 1-6]**, the method comprising:

monitoring incoming voice streams to detect a lack of voice activity for at least a predefined period of time **[Figs. 2-4; It is inherent in Kline that Voice Packet Processor determines a talkspurt based on a predefined period of time in order to**

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**send packets uniformly space by del\_T units of time during a talkspurt; col. 5, lines 17-23];**

assigning a different group identifier to the digital voice data upon detecting a lack of voice for at least the predefined period of time **[Figs. 2-4; When next talkspurt occurs, the transmitted packets will contain the new assigned sequence numbers; col. 5, lines 17-33];**

refraining from assigning a different group identifier to the digital voice data, otherwise **[i.e. continuing to receive incoming voice streams without silence, no sequence number is assigned until a sufficient number of sample have been accumulate; col. 4, lines 61-67];**

packet zing the digital voice data and the assigned group identifier to produce digital voice data packets **[Figs. 2-3; Voice Packet Processor 212 converts the received voice to packets or receives the voice packet; col. 4, lines 28-44; Voice Packet Processor 212 assigns a sequence number and a connection identifier for the voice packet; col. 4, line 57 – col. 5, line 4, col. 6, lines 23-29];** and

transmitting the digital voice data packets via the packet network **[Figs. 1-5; Send packets with sequence numbers when Voice Packet Processor detects the presence of active speech signals; col. 5, lines 17-33].**

Regarding claims 79 and 93, Kline teaches a method of processing voice for communication over a packet network **[Figs. 1-6],** the method comprising:

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monitoring incoming voice streams to detect a lack of voice activity for at least a predefined period of time **[Figs. 2-4; It is inherent in Kline that Voice Packet Processor determines a talkspurt based on a predefined period of time in order to send packets uniformly space by del\_T units of time during a talkspurt; col. 5, lines 17-23];**

processing the digital voice data and an identifier to produce digital voice packets for transmission via the packet network **[Figs. 1-3; Voice Packet Processor 212 converts the received voice to packets or receives the voice packet; col. 4, lines 28-44; Voice Packet Processor 212 assigns a sequence number and a connection identifier for the voice packet; col. 4, line 57 – col. 5, line 4, col. 6, lines 23-29];**

changing the processing of digital voice data and the identifier, if a lack of speech for at least the predefined period of time is detected **[Figs. 2-4; When next talkspurt occurs, the transmitted packets will contain the new assigned sequence numbers; col. 5, lines 17-33];** and

refraining from changing the processing of digital voice data and the identifier, otherwise **[i.e. continuing to receive incoming voice streams without silence, no sequence number is assigned until a sufficient number of sample have been accumulate; col. 4, lines 61-67].**

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-28, 43-46, 53-56, 70-73 and 83-86 are rejected under 35 U.S.C.

103(a) as being unpatentable over US Patent No. 6,157,653 to Kline et al. (hereinafter "Kline") in view of US Patent No. 6,366,771 to Angle et al. (hereinafter "Angle"), and further, in view of US Patent No. 6,132,306 to Trompower.

Regarding claims 25-28, 43-46, 53-56, 70-73 and 83-86, Kline teach each limitation set forth in its respective parent claim.

Kline further teaches voice and data source devices that may be connected to access interface(s) 214 such terminals, LANs, modems, PBXs, and telephones **[Fig.2; col. 4, lines 40-44]**. However, Kline does not expressly teach whether such terminals are wireless terminals.

Angle teaches a wireless network **[Fig. 1]** including a backbone and a plurality of access points coupled to the backbone. The wireless network further includes a plurality of portable data terminals having voice communication circuitry. The portable data terminals also include an RF transceiver for wirelessly communicating both data and audio communication with the backbone via one of the plurality of access points. The wireless network includes a gateway coupled to the backbone which receives at least a portion of the audio communication transmitted from the plurality of portable data terminals. The gateway further serves to establish a pseudo full duplex audio

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communication link between the plurality of portable data terminals and a device coupled to a public telephone exchange via a PBX interface **[Fig. 1; Abstract, col. 5, lines 1-12, 33-56, 65 - col. 6, line 24]**.

Trompower teaches a cellular communication system which includes a LAN or a WAN **[Fig. 2; Cellular Communication System 200]**. Trompower further teaches transmissions between the devices in the Cellular Communication System 200 occur in a packet format using Direct Sequence Spread Spectrum (DSSS) wireless communication techniques, a Frequency Hopping System or a hybrid system using direct sequence or frequency **[Col. 10, lines 40-47]** with bands including the 902-928 MHZ and 2.4 -2.48 Ghz ranges in the U.S **[Col. 3, lines 3-6]**.

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate a wireless cellular/voice network communication system as disclosed by Angle and Trompower into Kline's invention as voice source devices.

The motivation for combining the reference teachings would be to expand the voice and data sources devices to both wired and wireless devices to take advantage of the invented method and apparatus for adaptive smoothing delay for packet voice applications as disclosed by Kline.

***Response to Remarks***

6. Applicant's remarks filed October 8, 2008 regarding the rejection of claims 22, 40, 52, 68, 79 and their dependent claims in the application have been fully considered but they are moot in view of new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham, can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Albert T Chou/

Examiner, Art Unit 2616

November 14, 2008



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/Chi H Pham/

Supervisory Patent Examiner, Art Unit 2416

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